

REMARKS

This amendment is being filed in response to the Office Action having a mailing date of August 6, 2008. Various claims are amended as shown. New claims 33-34 are added. No new matter has been added. Claim 32 is canceled herein without prejudice. With this amendment, claims 1-31 and 33-34 are pending in the application.

I. Rejection under 35 U.S.C. § 112

The present Office Action rejected claim 4 under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite.

While it is respectfully submitted that claim 4 in its previously presented form meets definiteness requirements, claim 4 is nevertheless amended herein to facilitate prosecution and to provide further definiteness. In view of this amendment to claim 4, it is kindly requested that the indefiniteness rejection be withdrawn.

II. Discussion of the claims and cited references

The present Office Action rejected claims 1-6, 9-15, 17-22, 24-29 and 32 under 35 U.S.C. § 103(a) as being unpatentable over Mankude (U.S. Patent No. 6,795,866) in view of Egevang (U.S. Patent Application Publication No. 2003/0081605). Claims 7, 16, and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mankude in view of Egevang and in further view of Iny (U.S. Patent Application Publication No. 2002/0061030). Claims 8, 23, and 31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mankude in view of Egevang, and further in view of Malagrino (U.S. Patent No. 6,714,985).

For the reasons set forth below, these rejections are respectfully traversed. It is therefore kindly requested that the Examiner reconsider and withdraw the rejections.

A. Independent claim 1

Independent claim 1 is amended herein to include some of the subject matter from previously presented dependent claim 32, with claim 32 now canceled herein without prejudice. More specifically, claim 1 as amended herein recites, *inter alia*, "processing the head fragment to

determine a destination address for said head fragment and forwarding said head fragment to said determined destination address” and “applying said destination address ... to at least one non-head fragment of said packet that was stored prior to receiving said head fragment and to at least one non-head fragment of said packet that is received after said forwarding said head fragment.” It is respectfully submitted that these limitations are not met by the cited references, whether singly or in combination.

For example, page 4 (section 5) of the present Office Action has admitted that Mankude has not very clearly mentioned “‘applying (e.g., tagging) the determined destination address to any corresponding stored plurality non-head fragment after the session is generated’ and ‘an exit point coupled to the network device to update non-head fragments’.”

To supply the missing teachings of Mankude, the present Office Action relies upon Egevang. However, it is respectfully submitted that Egevang does not cure the deficiencies of Mankude.

More particularly, the present Office Action cites Egevang as teaching the following (emphasis ours):

“Egevang discloses a router means comprising a packet fragmentation manager (PFM) comprising a collection module receives packet fragments ([0045] lines 1-5) and then following receiving a first packet fragment (header), a translation module will translate destination address to subsequent packet fragments based on the first packet fragment destination address and network address translation (NAT) process ([0047]). The translation and modifying steps may read on as applying the determined destination address to the non-head packet fragments. Thereafter, a communication module (exit point) applies (modifies) the destination address based on the NAT process which is determined by the first packet fragment destination address ([0048] lines 1-3 & 7-11).”

What the present Office Action's above-quoted interpretation of Egevang fails to recognize, however, is that Egevang waits to collect/receive all of his packet fragments before he begins the NAT process to determine the destination address for the fragments and before he begins forwarding the fragments to the destination address. Specifically, Egevang teaches the following in his paragraph [0046] reproduced below (emphasis ours):

“[0046] Verification module 404 may use the offset values and the packet length received from collection module 402 to verify whether all the packet fragments for a particular packet have been received. Each offset value may represent a position from the starting position to the ending position of the original packet. The ending position may be represented by, for example, the packet length. Verification module 404 may, for example, maintain a verification table indexed by position segments, and fill in the table as the packet fragments are collected by collection module 402. For example, the position segments may be represented in bytes divided by eight (8). Once all the table entries are filled, verification module 404 may send a message to translation module 406 to begin the NAT process. A timer may be used to determine whether empty table entries exist prior to timer expiration. If such a condition occurs, verification module 404 may send a message to communication module 408 to release all queued packet fragments for use by system or network. For example, the queued packet fragments may be processed using the normal assembly/disassembly packet fragmentation process as defined by the IP Specification.”

Thus from the above-quoted passage of Egevang, it is abundantly clear that he provides the verification module 404 to verify “whether all the packet fragments for a particular packet have been received” and then begins the NAT process after all of the packet fragments have been received. Thus, Egevang does not determine/apply the destination address (using the

NAT process) until after all fragments are received, and so therefore explicitly/implicitly also does not or cannot perform any fragment forwarding to the destination address until after all fragments are received (since the destination address to forward the packets cannot be known until after all fragments are received). In view of these teachings of Egevang that involve delaying any forwarding until all fragments are received, it is therefore respectfully submitted that Egevang does not meet at least the limitations of claim 1 that require “applying said destination address for said head fragment, which was determined by said processing of said head fragment ... to at least one non-head fragment of said packet that is received after said forwarding said head fragment.”

Accordingly, claim 1 is allowable.

B. Independent claims 9, 13, 17, 20, and 28

Independent claims 9, 13, 17, 20, and 28 are amended herein to recite subject matter generally similar to claim 1 above, using varying language. Thus for reasons analogous to those explained above, claims 9, 13, 17, 20, and 28 are also allowable.

C. Other claim amendments

Various other amendments are made to the claims as shown to provide appropriate antecedent basis, to provide consistent recitations between and within related claims, to more precisely recite the subject matter contained therein, to make grammatical/typographical updates, and/or to otherwise place such claims in better form.

Claims 21 and 29 are amended to recite, *inter alia*, that the fragments received by the switch are fragmented from the packet by a router. It is respectfully submitted that these limitations pertaining to a switch and router and fragmentation are not met by the cited references. For example, page 7 (section 5) of the present Office Action has interpreted Egevang's router 110 having the packet fragmentation manager (PFM) as being “a switch network device.” However, it is respectfully submitted that a “switch” is not the same as a “router,” and that a person skilled in the art would recognize that these two devices are not the same/synonymous devices. With the amendments to claims 21 and 29, it is clarified that the

router and the switch are not one and the same device, since the router performs the fragmentation to obtain the fragments received by the switch. Claims 21 and 29 are thus further allowable.

D. New claims 33-34

New independent claim 33 recites subject matter generally along the lines of those found in previously presented claims 28, 30, and 31, which were rejected on the basis of Mankude, Egevang, Iny, and Malagrino. Claim 33 recites an apparatus that includes a switch adapted to, *inter alia*, receive a head fragment of a packet. It is respectfully submitted that claim 33 is allowable over the cited references, whether singly or in combination.

For example, page 7 (section 5) of the present Office Action has interpreted Egevang's router 110 having the packet fragmentation manager (PFM) as being "a switch network device." However, it is respectfully submitted that a "switch" is not the same as a "router," and that a person skilled in the art would recognize that these two devices are not the same/synonymous devices.

Claim 34 depends upon claim 33 and recites, *inter alia*, that the switch is adapted to apply the determined destination address to the non-head fragment that is received after the head fragment is forwarded. As previously explained above, the cited references do not provide this feature, since for example, Egevang needs to receive all of his fragments before he performs forwarding.

In view of the above, it is respectfully submitted that claims 33 and 34 are allowable.

III. Conclusion

If there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the attorney of record (Dennis M. de Guzman) at (206) 622-4900.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are believed to be allowable.
Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,
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